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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/523,332	03/10/2000	Akihiko Mochida	P/16-259	5458

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EXAMINER	
WONG, ALLEN C	
ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/523,332	MOCHIDA ET AL.	
	Examiner	Art Unit	
	Allen Wong	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,9-16,18 and 20-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,9-16,18 and 20-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/3/06 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 18, 22, 26 and 30 have been read and considered but are moot in view of the new ground(s) of rejection.

The claims are now rejected under 35 U.S.C. 103(a) in view of Kaiya and Matumoto as disclosed below.

Regarding lines 21-23 on page 12 of applicant's remarks, applicant states that the prior art does not disclose the limitations "a timing signal generation circuit" and a "phase adjustment circuit". The examiner respectfully disagrees. The timing generation circuit is disclosed in Kaiya, where element 33a of figure 4 is the same synchronization circuit as element 33a in fig.1 in that element 78 is the timing signal generation circuit that can generate a timing signal to generate the imaging apparatus, including imaging device, at element 4a of figure 1 to drive the imaging apparatus to obtain an optical image and produce an output at display 5a.

With regards to the phase adjustment circuit, in figure 1, Kaiya discloses the common phase adjustment circuit 33a in that it is used to vary timing signals for driving the imaging device in imaging apparatus 4a. Also, peruse Kaiya's excerpt in column 6, lines 38-52. Kaiya does not specifically disclose "the compensation of the signal delay occurring over a signal transmission line." However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line. Matumoto's figures 1 and 3 suggest the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs, as suggested in Matumoto's column 2, lines 39-47.

Regarding lines 11-14 on page 16 of applicant's remarks, applicant mentions that the double patenting rejection of claim1 is traversed. The examiner respectfully disagrees. The obviousness-type double patenting rejection is still considered to be reasonable because of the discussion and reasoning as indicated in the above paragraphs and in the below rejection.

Claim Rejections – 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7, 9-16, 18 and 20-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiya (5,178,130) and Matumoto (5,434,615).

Regarding claim 1, Kaiya discloses an endoscopic imaging system comprising:

an endoscope having an insertion unit which is insertable into an object, the elongated insertion unit having an illumination optical system for illuminating an object and an objective optical system for forming an optical image of the illuminated object (fig.1, element 2a);

an imaging apparatus having an imaging device for picking up the optical image and outputting a signal (fig.1, element 4a);

a video processing unit to which the imaging apparatus is detachably connected and which processes the signal to produce a standard video signal (fig.1, element 32a);

a display for displaying images of the object according to the standard video signal (fig.1, element 5a);

a timing signal generation circuit, incorporated in the imaging apparatus, for generating timing signals used to drive the imaging apparatus, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied

timing signals (fig.4, element 33a is the same synchronization circuit as element 33a in fig.1, where element 78 is the timing signal generation circuit); and

a common phase adjustment circuit for adjusting the phases of the timing signals so as to compensate a signal delay occurring over a signal to said imaging device which is interchangeably linked and over which a signal is transmitted (fig.1, element 33a is a phase adjustment circuit; see col.6, ln.38-52 and fig.9, note element 64a and 64b are the interchangeably switches that can provide the switching means for interchangeable linkage between the endoscopic devices).

Kaiya does not specifically disclose the compensation of the signal delay occurring over a signal transmission line. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3, note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Note claims 2-5, 7, 9-16, 18, 20-25 and 30-36 have similar corresponding elements.

Regarding claim 26, Kaiya discloses an endoscope system comprising:

first and second endoscopes having an insertion unit which is insertable onto an object, each insertion unit having an illumination optical system for illuminating the object and an objective optical system for introducing an optical image of the illuminated object (fig.1, elements 2a and 2b are respective endoscopes);

first and second imaging apparatuses having first and second imaging devices for picking up optical images produced by the first and second endoscopes, respectively, and outputting first and second signals, respectively (fig.1, elements 4a and 4b serve as respective imaging apparatuses);

a video processing unit to which the first and second imaging apparatuses are selectively detachably connected and which processes the first and second signals to produce a video signal (fig.1, elements 32a and 32b);

a display for displaying images of said object according to the video signal (fig.1, elements 5a and 5b);

first and second timing signal generator circuits, respectively incorporated in the first and second imaging apparatuses, for generating timing signals used to drive the imaging devices, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied timing signals (fig.4, element 33a is the same synchronization circuit as element 33a in fig.1, where element 78 is the timing signal generation circuit, also note element 34 has a timing signal generation circuit); and

first and second phase adjustment circuits for adjusting the phases of the timing signals so as to compensate for signal delays occurring over first and second signals to the first and second imaging devices which are linked and over which a signal is transmitted (fig.1, elements 33a and 34 are respective phase adjustment circuits; see col.6, ln.38-52 and fig.9, note element 64a and 64b are the interchangeably switches that can provide the switching means for interchangeable linkage between the endoscopic devices).

Kaiya does not specifically disclose the compensation of the signal delay occurring over the signal transmission lines. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3, note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Matumoto, as a whole, for compensating the signal delay occurring over the signal transmission lines in order to effectively operate a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and to minimize circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Note claims 27-29 have similar corresponding elements.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 18, 22, 26 and 30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,178,130. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claim language in the application 09/523,332 is broader than claim 1 of the U.S. Patent No. 5,178,130.

Further, in the present application, the applicant's independent claims 1, 18, 22 disclose a "timing signal generation circuit... to drive said imaging device", and applicant's independent claim 26 discloses the "first and second timing signal generation circuits... to drive said imaging devices." In claim 1, Kaiya (US 5,178,130) discloses a "first and second driving circuits... by applying respectively first and second driving signals to said first and second solid state imaging devices." Clearly, albeit not exact, both the applicant and Kaiya are disclosing similar limitations because the

applicant's timing signal generation circuits and Kaiya's driving circuits serve the same purpose, to drive the imaging devices.

Moreover, the applicant's independent claims 1, 18 and 22 disclose a "phase adjustment circuit for adjusting the phases of the timing signals", and applicant's claim 26 discloses "first and second phase adjustment circuits for adjusting the phases of the timing signals". Kaiya's claim 1 discloses "a synchronization controlling means synchronizing the illumination periods of the respective wavelengths". Evidently, one of ordinary skilled can clearly acknowledge that the Kaiya's "synchronizing the illumination periods" is basically the same as the applicant's "adjusting the phases of the timing signals" because they both compensate for signal delays.

Kaiya does not specifically disclose the compensation of the signal delay occurring over a signal transmission line. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3, note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic

endoscopes having different lengths and minimizing circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen Wong
Primary Examiner
Art Unit 2613

AW
3/6/06